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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/993,766 | 11/27/2001 | Takahiro Tochioka | 740819-705 | 7593 |

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| EXAMINER | |
|---|---|
| SHOSHO, CALLIE E | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1714 | |

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/993,766 | TOCHIOKA ET AL. | |
| | Examiner | Art Unit | |
| | Callie E. Shosho | 1714 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *06 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *10,12,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10,12,24 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 4/6/04. Further, in light of the cancellation of claims 8-9 and 13-23, the restriction requirement set forth in the office action mailed 9/24/03 is withdrawn.

The new grounds of rejection as set forth below are necessitated by applicants' amendment filed 4/6/04 and thus, the following action is final.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 10, 12, and 24-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 10 has been amended to recite that the affinity providing component is included in the masterbatch "in a content of 1.9 to 20 mass percent with respect to the total mass". It is the examiner's position that this phrase fails to satisfy the written description requirement under the cited statute since there does not appear to be a written description requirement of the cited phrase in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

While applicant has not pointed to any portion of the specification as support for the above phrase, it is noted that the examples disclosed in the specification utilize affinity providing component in amounts of 1.9, 5, 7, 10, and 20 mass percent. However, while the examples provide support for the use of affinity providing component in amounts of 1.9, 5, 7, 10, or 20 mass percent, there is no support in the specification as originally filed for the recitation that the affinity providing component is present in amount of 1.9 to 20 mass percent.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 10, 12, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino (U.S. 5,514,745) in view of Fujii et al. (U.S. 4,334,040) and Mitsuno et al. (U.S. 5,409,991).

Yoshino discloses long glass fiber filler reinforced resin material for injection molding comprising (i) 5-70% masterbatch comprising 60-90% long glass fiber coated with silane coupling agent, polypropylene matrix resin with melt flow rate measured at 230 $^{0}$C and 2.16 kg of, for instance, 120 g/10 min, 200 g/10 min, or 300 g/10 min, and acrylic acid or maleic anhydride modified polypropylene and (ii) 30-95% diluting polymer which is ethylene-propylene block copolymer which has melt flow rate of 3-20 g/10 min. In light of the disclosure of the melt flow rate of the polypropylene, i.e. 200 g/10 min or 300 g/10 min, and the melt flow rate of the ethylene-propylene block copolymer, i.e. 3-20 g/10 min, it is clear that the melt flow rate of the

polypropylene is larger than twice the melt flow rate of the ethylene-propylene block copolymer. The material is used to form rod-shaped, i.e. elliptical, pellets which are 2-50 mm long and comprise the glass fibers in longitudinal direction (col.1, lines 43-49 and 61, col.4, lines 18-19, 29-30, 42-48, and 52-54, col.5, lines 18-26, col.6, lines 39-62, col.6, line 65-col.7, line 3, col.7, lines 37-40, col.8, lines 7 and 18-27, and col.9, lines 10-11).

Although there is no disclosure of the molecular weight of the polypropylene, given that Yoshino discloses polypropylene with melt flow rate identical to that presently claimed, it is clear that the polypropylene would intrinsically possesses molecular weight as presently claimed.

Attention is drawn to col.12, lines 23-48 of Yoshino that discloses resin material comprising 5-70% masterbatch of pellets and 30-95% polypropylene to dilute the masterbatch wherein the pellets comprise glass fiber reinforced polypropylene that comprise 60-90% glass fiber and thus, 10-40% polypropylene. From col.4, lines 52-54 and col.5, lines 18-21, it is disclosed that the polypropylene comprises mixture of non-modified polypropylene and modified polypropylene such as polypropylene modified with (meth)acrylic acid or acid anhydride which corresponds to presently claimed affinity providing component. Thus, it is clear that the modified polypropylene is present in amount of greater than 0% (given that Yoshino requires that the pellets comprise modified polypropylene) to 40% (non-modified polypropylene not present) of the masterbatch.

The difference between Yoshino and the present claimed invention is the requirement in the claims of (a) pentad isotactic index of the polypropylene matrix resin and the propylene component of the ethylene-propylene block copolymer and (b) ethylene-propylene block copolymer having islands-sea structure.

With respect to difference (a), Mitsuno et al., which is drawn to thermoplastic propylene resin composition comprising glass fiber, disclose using propylene homopolymer or ethylene-propylene block copolymer wherein the propylene homopolymer and propylene component of the block copolymer each possess pentad isotactic index of 97% or greater. The motivation for using such polymer is to produce composition with high heat resistance, stiffness, and scratch resistance (col.6, lines 30-36).

With respect to difference (b), it is noted that Yoshino discloses the use of ethylene-propylene block copolymer, however, there is no disclosure that the ethylene-propylene block copolymer has islands-sea structure.

Fujii et al. disclose the use of block copolymer obtained from monomers including ethylene and propylene wherein the block copolymer has islands-sea structure and disclose that such block copolymer has improved impact resistance (col.5, lines 5-15)

In light of the motivation for using polypropylene and ethylene-propylene block copolymer with pentad isotactic index disclosed by Mitsuno et al. as described above as well as the motivation for using ethylene-propylene block copolymer having islands-sea structure disclosed by Fujii et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polypropylene and ethylene-propylene block copolymer in the long glass fiber filled resin material of Yoshino in order to produce material with high heat resistance, stiffness, and scratch resistance and improved impact resistance, and thereby arrive at the claimed invention.

**Response to Arguments**

6. Applicants' arguments filed 4/6/04 have been fully considered but they are not persuasive.

Specifically, applicants argue that:

(a) Yoshino discloses amount of affinity providing component outside the scope of the present claims.

(b) No disclosure in Yoshino of ethylene-block copolymer having islands-sea structure as presently claimed.

(c) No disclosure in Mitsuno et al. of affinity providing component in presently claimed amount or of ethylene-propylene block copolymer having islands-sea structure as presently claimed.

(d) There is no motivation to combine Yoshino with Mitsuno et al. given that the modified matrix polymer disclosed by Yoshino cannot obtain high isotactic pentad index as disclosed by Mitsuno et al.

With respect to difference (a), applicants argue that the examples of Yoshino disclose the use of affinity providing component in amount of 25%, which falls outside the scope of the present claims.

However, firstly, it is noted that it is not clear how applicants determined that the examples of Yoshino utilize affinity providing component in amount of 25%. Clarification is requested.

Secondly, attention is drawn to col.12, lines 23-48 of Yoshino that disclose resin material comprising 5-70% masterbatch of pellets and 30-95% polypropylene to dilute the masterbatch wherein the pellets comprise glass fiber reinforced polypropylene that comprise 60-90% glass fiber and thus, 10-40% polypropylene. From col.4, lines 52-54 and col.5, lines 18-21, it is disclosed that the polypropylene comprises mixture of non-modified polypropylene and modified polypropylene such as polypropylene modified with (meth)acrylic acid or acid anhydride which corresponds to presently claimed affinity providing component. Thus, it is clear that the modified polypropylene or affinity providing component is present in the masterbatch in an amount of greater than 0% (given that Yoshino requires that the glass pellets comprises modified polypropylene) to 40% (non-modified polypropylene not present).

In light of the above, it appears that the amount of affinity providing component disclosed by Yoshino does in fact overlap that presently claimed. Further, assuming that the examples of Yoshino disclose the use of 25% affinity providing component as argued by applicants, while it is agreed that this amount is outside the scope of the present claims, "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others", *In re Courtright*, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). Further, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims", *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). As described above, a fair reading of Yoshino as a whole discloses that the affinity providing component, i.e. acrylic acid or acid anhydride modified polypropylene, is present in amount that overlaps that presently claimed.

With respect to argument (b), it is agreed that the there is no explicit disclosure in Yoshino that the ethylene-propylene block copolymer has islands-sea structure. This is why Yoshino is now used in combination with Fujii et al. which teaches that block copolymer in the form of islands-sea structure possesses improved impact resistance.

With respect to difference (c), it is agreed that there is no disclosure in Mitsuno et al. of ethylene-propylene block copolymer having islands-sea structure as presently claimed. However, while applicants argue that Mitsuno et al. disclose amount of affinity providing component outside the scope of the present claims and point to examples 22 and 45 of Mitsuno et al. as support for this position, these are but two preferred embodiments of Mitsuno et al. Example 27, for instance, of Mitsuno et al. discloses the use of 15% affinity providing component which does fall within the scope of the present claims.

Further, note that Mitsuno et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), In *re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, specific isotactic index of propylene homopolymer and propylene component of ethylene-propylene block copolymer and in combination with the primary reference, discloses the presently claimed invention.

Applicants argue that although Mitsuno et al. is used as a teaching reference, the teachings of such reference when combined with the primary reference cannot be such that the

intent of the primary reference is destroyed when such combination is made. However, it is the examiner's position that combining Yoshino with Mitsuno et al. does not destroy the intent of Yoshino. It is noted that Yoshino is combined with Mitsuno et al. to teach the isotactic pentad fraction of propylene homopolymer and propylene component of ethylene-propylene block copolymer. Mitsuno et al. is not used for its teaching of the amount of affinity providing component given that such amount is already disclosed by Yoshino et al. Further, while there is no disclosure in Mitsuno et al of ethylene-propylene block copolymer having islands-sea structure, there is also no disclosure of such block copolymer in Yoshino which is why the reference is now combined with Fujii et al.

With respect to argument (d), applicants argue that the modified polymer disclosed in Yoshino cannot obtain the high isotactic index disclosed by Mitsuno et al. and thus, there is no motivation to combine the references. However, it is noted that Yoshino disclose mixture of both modified polypropylene, i.e. (meth)acrylic acid or acid anhydride modified polypropylene, corresponding to presently claimed affinity providing component and non-modified polypropylene corresponding to presently claimed homopolypropylene. There is no disclosure in Yoshino of the isotactic pentad index of the non-modified polypropylene which is why Yoshino is used in combination with Mitsuno et al. which teaches using homopolypropylene with isotactic index of 97% or greater in order to produce composition with high heat resistance, stiffness, and scratch resistance. Further, while applicants argue that modified matrix polymer of Yoshino cannot obtain high isotactic pentad index, applicants have provided no evidence to support this position.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
6/22/04